IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Currently Amended) A beam-shaping element ~~(200;400)~~ comprising:

[[-]] a cavity ~~(210)~~;

[[-]] an optical axis ~~(90)~~ extending through the cavity ~~(210)~~;

[[-]] a first fluid ~~(250)~~ and a second fluid ~~(252)~~ having different indices of refraction; and

[[-]] at least one pump ~~(240)~~ arranged to pump the fluids ~~(250,252)~~ between a first configuration in which the first fluid ~~(250)~~ occupies the cavity ~~(210)~~, and a second configuration in which the second fluid ~~(252)~~ occupies the cavity ~~(210)~~; and

a fixed lens concatenated with said element, the fixed lens being formed of a material having a refractive index substantially same as a refractive index of one of said fluids;

wherein the cavity ~~(210)~~ has at least one curved surface ~~(215,225)~~ extending transverse the optical axis ~~(90)~~.

2.(Currently Amended) ~~An~~ The element as claimed in claim 1, wherein the pump ~~(240)~~ operates ~~utilising~~ utilizing at least one of: electro-capillary, differential-pressure electro-capillarity, electrowetting, continuous electrowetting, electrophoresis, electroosmosis, dielectrophoresis, electrohydrodynamic pumping, thermocapillary, thermal expansion, dielectric pumping, mechanic pumping or variable dielectric pumping.

3.(Currently Amended) ~~An~~ The element as claimed in claim 1, wherein said cavity ~~(210)~~ is cylindrical, with the longitudinal axis of the cavity being coaxial with the optical axis ~~(90)~~.

4.(Currently Amended) ~~An~~ The element as claimed in claim 1, wherein said curved surface ~~(215,225)~~ is aspherical.

5.(Currently Amended) ~~An~~ The element as claimed in claim 1, wherein said curved surface ~~(215,225)~~ is rotationally symmetric

with respect to the optical axis ~~(90)~~.

6.(Currently Amended) ~~An~~ The element as claimed in claim 1, wherein in the first configuration, the element is arranged to shape an incident radiation beam ~~(120)~~ to provide a first beam intensity profile ~~(122; 422)~~, and in the second configuration the element is arranged to shape an incident radiation beam ~~(120)~~ to provide a second different beam intensity profile ~~(122'; 422')~~.

7.(Currently Amended) An optical device ~~(1)~~ comprising a beam-shaping element ~~(200; 400)~~, the element comprising:

[[-]] a cavity ~~(210)~~;

[[-]] an optical axis ~~(90)~~ extending through the cavity ~~(210)~~;

[[-]] a first fluid ~~(250)~~ and a second fluid ~~(252)~~ having different indices of refraction; ~~and~~

[[-]] at least one pump ~~(240)~~ arranged to pump the fluids ~~(250, 252)~~ between a first configuration in which the first fluid ~~(250)~~ occupies the cavity ~~(210)~~, and a second configuration in which the second fluid ~~(252)~~ occupies the cavity ~~(210)~~; and

a fixed lens concatenated with said element, the fixed lens being formed of a material having a refractive index substantially same as a refractive index of one of said fluids;

wherein the cavity ~~(210)~~ has at least one curved surface ~~(215, 225)~~ extending transverse the optical axis ~~(90)~~.

Claim 8-9 (Canceled)

10. (Currently Amended) ~~A device as claimed in claim 7,~~ An optical device comprising a beam-shaping element, the element comprising:

a cavity;

an optical axis extending through the cavity (210);

a first fluid and a second fluid having different indices of refraction; and

at least one pump arranged to pump the fluids between a first configuration in which the first fluid occupies the cavity, and a second configuration in which the second fluid occupies the cavity;

wherein the cavity has at least one curved surface extending transverse the optical axis; and

wherein the device is an optical scanning device ~~(1)~~ for scanning an information layer ~~(4)~~ of an optical record carrier ~~(2)~~, the device ~~(1)~~ comprising a radiation source ~~(11)~~ for generating a radiation beam ~~(12, 15, 20)~~ and an objective system ~~(18)~~ for converging the radiation beam ~~(12, 15, 20)~~ on the information layer ~~(4)~~.

11. (Currently Amended) A method of manufacturing a beam-shaping element ~~(200; 400)~~, the method comprising the ~~steps~~ acts of:

[[-]] providing a cavity ~~(210)~~, with an optical axis ~~(90)~~ extending through the cavity ~~(210)~~, the cavity having at least one curved surface ~~(215, 225)~~ extending transverse the optical axis ~~(90)~~;

[[-]] providing a first fluid ~~(250)~~ and a second fluid ~~(252)~~ having different indices of refraction; and providing at least one pump ~~(240)~~ arranged to pump the fluids ~~(250, 252)~~ between a first configuration in which the first fluid ~~(250)~~ occupies the cavity ~~(210)~~, and a second configuration in which the second fluid ~~(252)~~ occupies the cavity ~~(210)~~; and

providing a fixed lens concatenated with said element, the fixed lens being formed of a material having a refractive index substantially same as a refractive index of one of the first and second fluids.

12. (Currently Amended) A method of manufacturing an optical device ~~(1)~~, the method comprising the ~~steps~~ acts of:

providing a beam-shaping element ~~(200; 400)~~, the beam-shaping element comprising:

[[-]] a cavity ~~(210)~~;

[[-]] an optical axis ~~(90)~~ extending through the cavity ~~(210)~~;

[[-]] a first fluid ~~(250)~~ and a second fluid ~~(252)~~ having different indices of refraction;

a fixed lens concatenated with said element, the fixed lens being formed of a material having a refractive index substantially same as a refractive index of one of the first and second fluids; and

[[-]] at least one pump ~~(240)~~ arranged to pump the fluids ~~(250, 252)~~ between a first configuration in which the first fluid

~~(250)~~ occupies the cavity ~~(210)~~, and a second configuration in which the second fluid ~~(252)~~ occupies the cavity ~~(210)~~; and

wherein the cavity ~~(210) has~~ at least one curved surface ~~(215; 225)~~ extending transverse the optical axis ~~(90)~~.

13. (Currently Amended) A method of operating a beam-shaping element, the element comprising a cavity; an optical axis extending through the cavity; the cavity having at least one curved surface extending transverse the optical axis; a first fluid and a second fluid having different indices of refraction; a fixed lens concatenated with said element, the fixed lens being formed of a material having a refractive index substantially same as a refractive index of one of the first and second fluids; and at least one pump, the method comprising:

a first ~~step~~ act of pumping the first fluid out of the cavity; and

a second ~~step~~ act of pumping the second fluid into the cavity, wherein the first act and the second act change an optical characteristic of the element.

14. (Currently Amended) ~~A~~ The method as claimed in claim 13, in which the first ~~step~~ act and the second ~~step~~ act are performed simultaneously.